

## I CLAIM:

1. In the setting of a computer/printer system which includes a screen-display device, the method comprising

requesting from a computer-connected printer a pre-printing screen-display  
5 preview of a document which has been sent by the computer to that printer for printing,

generating in the printer a collection of print-control data which exactly defines how the document that has been sent to the printer will look when printed, and which will be employed by the printer to print the document,

communicating the print-control data collection to the screen-display device, and  
10 on the basis of said communicating, displaying on the screen in the screen-display device an exact visual preview of the subject document.

2. The method of claim 1 which is practiced specifically in a setting wherein the printer forms part of an MFP device.

3. A computer-associated method of displaying on a display screen a true print preview of a document about to be printed comprising

in a printer, generating a collection of print-control data which will be used by the printer directly to print the document, and

20 before printing that document, using that collection directly to create, on a display screen which is operatively associated with the printer, a preview display which shows how the printed document will look after printing.

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4. The method of claim 3 which is practiced specifically in a setting where the printer forms part of an MFP device.

5. The method of claim 3, wherein the printer is connected to a computer which is also operatively associated with the display screen, and which has instructed the printer to generate the collection of print-control data, and said using involves conveying a copy of that data from the printer to the computer.

6. A computer-associated method of displaying on a display screen a true print preview of a document about to be printed comprising

utilizing a computer which is associated with a display screen, sending from the computer to a connected printer instructions regarding the printing of a document,

in the connected printer, receiving these instructions and generating from such instructions a collection of print-control data which is useable by the printer to print the document,

before printing that document, sending back to the computer from the printer the generated print-control data collection, and

in the computer, creating on the associated display screen a user-viewable, true-preview document display based directly upon the sent-back collection of print-control data, which display shows exactly how the printed document will look after printing.

7. A method employable in a computer environment for previewing the exact final appearance of a document which is about to be printed comprising

sending a print-instruction data stream to a printer,

within the printer, creating from that print-instruction data stream a print-control

5 data collection which is effective directly to implement a related printing operation,

before implementing such a printing operation, sending a copy of the print-control data collection to a screen-display viewing instrumentality, and

displaying on that instrumentality a true preview of what the printed document would look like if printed on the basis of the print-control data collection.

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8. The method of claim 7 which is practiced specifically in a setting where the printer forms part of an MFP device.

9. In a computer/printer system wherein a created document has been sent to a  
15 printer for printing, a method for creating electronically a true print preview of that document comprising

requesting such a preview from the printer, and

by initiation from the printer, producing an electronic screen-display surrogate of that document which substantially exactly shows how the printer will print the document.

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10. A method for producing a true print-preview display in the setting of computer structure which is operatively associated both with a screen-display device, and with a printer that is operatively connected to the computer structure, said method comprising

5 from a document-creating application in the computer structure creating a document, and with reference to the created document, sending a set of related document-printing instructions from the computer to the printer,

in association with said sending, requesting from the printer a print-preview display,

10 in the printer, on the basis of such sent instructions, generating a collection of document print-control data which the printer will directly use to print the created document, and in response to the print-preview display request, sending back to the computer structure a print-preview data stream based exactly upon the generated print-control data collection, and

15 through cooperative interaction between the computer structure and the screen-display device, creating on the screen-display device from that sent back data stream a true print-preview display which exactly shows what the printer will print from the associated, underlying print-control data collection.

20 11. The method of claim 10 which is practiced specifically in a setting where the printer forms part of an MFP device.

12. The method of claim 10, wherein the printer includes an integrated controller and a print engine, the controller functions to receive and interpret such sent document-printing instructions, and to generate, and ultimately to send to the print engine, the mentioned print-control data collection, and the sent back print-preview data stream is  
5 directly derived from the controller-generated data collection.

13. The method of claim 12, wherein the printer further includes a data-storage device operatively connected both to the controller and to the print engine, and this data-storage device is operable to receive, capture, and retransmit on request, the controller-  
10 generated data collection.

14. The method of claim 10, wherein the computer structure and the screen-display device together form portions of an integrated computer.

15. The method of claim 10, wherein the screen-display device and the printer together form portions of an integrated printer device.

16. The method of claim 10 which further comprises, in association with requesting a print-preview display, exercising one or more related options selected from the list including: (a) asking for document rendition in a selected one of different color formats, or in a grey-scale format, or in a bi-tonal format; (b) instructing the printer to  
5 handle related document data in a selected state of data compression and/or bit depth; (c) instructing the printer to handle related document data at a selected level of resolution; and (d), asking that all or some selected portion of a requested print-preview display be presented in thumbnail fashion.

10 17. Within a printer having a controller and a print engine which have a defined cooperative relationship,

generating by the controller a print-control data collection which is effective, without further data manipulation, directly to control the printer's print engine in the printing of a document, and

15 prior to printing, conveying that data collection appropriately for the generation of a pre-printing preview screen display of the intended document.

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18. A computer/printer system with true print-preview screen-display capability comprising

computer structure armed with a document-creation application,

a hard-copy printer operatively connected to said computer structure,

5 a screen-display device having a screen display operatively associated both with said computer structure and with said printer, and

print-preview enabling structure operatively associated with said computer structure and with said printer, enabling, in relation to the proposed printing by the printer of a document that has been created in the computer structure within the application, and  
10 sent to the printer, a user request that the printer effectively send to said screen-display device, for displaying on its screen, data relating to a true image showing how the printer will actually print to hard copy the sent document so created within the application.

19. The system of claim 18 wherein said screen-display device is separate from  
15 said computer structure and said printer.

20. The system of claim 18 wherein said screen-display device is incorporated in said computer structure.

21. The system of claim 18 wherein said screen-display device is incorporated in said printer.

22. The system of claim 18 wherein said printer forms part of an MFP device.

23. A computer-connectable printer comprising

input structure adapted to receive document-printing instructions from a connected computer,

5 interpretation structure operatively connected to said input structure, operable to effect the generation, from such received instructions, of a print-control data collection which is directly useable by the printer to print a related document, and

10 output structure operatively connected to said interpretation structure, operable, on request, to convey a copy of such a data collection to a connected computer for the purpose, *inter alia*, of enabling the computer to create a true preview display of the actual document which will be printed if and when the printer utilizes the data collection to print a document.

24. The printer of claim 23 which forms part of an MFP device.

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